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RAISING THE COMPREHENSION LEVEL OF THE ADVANTAGED
STUDENT THROUGH LOCUS OF CONTROL, CONCEPTUAL
PREREQUISITES, AND IMAGERY

by

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in partial fulfillment of the requirements
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RUNNING HEAD: RAISING THE COMPREHENSION LEVEL OF THE ADVANTAGED

Abstract

The study was conducted to investigate the possibility of raising the comprehension scores of twenty advantaged students through the use of attribution theory in moving the student's locus of control, concept work, and imaging. The subjects of the control and experimental groups were male and female tenth and eleventh grade summer school students whose comprehension scores were at the fiftieth percentile or below or students who would benefit from comprehension instruction. The Gates-MacGinitie Reading Tests (1978), Level F, Forms 1 and 2 were used respectively for the pretest and posttest. A related sample t test and analysis of covariance was used to test the null hypothesis. A significant gain was evidenced from the pretest to the posttest and the null hypothesis was rejected. The implications of the study are that the application of attribution theory in the movement of the student's locus of control, concept study, and imaging can significantly raise the comprehension scores of the advantaged student.

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Chapter I: Introduction

Problem Statement

By working with the culturally advantaged student who has a less inhibiting background, can comprehension skills be increased through the application of attributional locus of control theory with the use of conceptual prerequisites and imagery?

Rationale

The majority of studies done in the area of reading comprehension disabilities seemingly have been conducted with regard to the disadvantaged student. Consider the child who has none of the limitations which are commonly associated with the socially and culturally disadvantaged child yet still has poor reading comprehension skills. With no apparent health problems, a supportive family, and a proliferation of experiential and world knowledge, it may be an easier task to get to the basis of the disability and, in turn, create a program which could benefit all. Societal expectations of these students are higher: success is assumed; educators have somehow failed to give these students the attention they require. Cookson (1986) questions whether teachers have paid too much attention to the basics and consequently ignored

the imagination of society and its needs. These students are sometimes reacting to parental or societal pressure and sometimes to boredom. A student's behavior is regulated by the pupil's self image (Rude & Oehlkers, 1984). The authors go on to say that students who "consider themselves disabled will perform accordingly" (p. 256). Gergen's study (1968) found that people strive to behave in a manner which is consistent with their view of themselves (cited in Wlodkowski, 1986). Whether a student is bored or has a poor self image, the skill of comprehension can be raised through the use of the theory of attribution and locus of control. In locus of control work, the instructor attempts to get the student to believe that the success or failure that the child encounters is attributed to the ability and effort which is expended (success) or the lack of effort (failure). Using prerequisite concept learning and imaging--the mental visualization of the text read--skills in reading comprehension should increase.

Purpose

According to Entwisle and Hayduk (1978), social class differences forecast achievement consistently. The purpose of this paper is to investigate the exceptions to that observation and to assess the possibilities of using a more aware approach when dealing with the advantaged

student. This approach includes the attempt--using attribution theory--to move a student's locus of control from external (believing that success is due to luck rather than to effort and ability) to internal (believing that success is due to effort and ability) by modelling this behavior and verbally reinforcing the students successful attempts at reading comprehension. Instruction in concepts is applied before the attempt and the student's imaging of the events of the prose selection takes place throughout the attempt to increase reading comprehension.

Chapter II: Review of the Literature

In reviewing the literature concerning the increase of reading comprehension scores through awareness, attribution, concepts, and imaging, the following was found.

Awareness

With family background and experiential knowledge playing such an important role in learning, students who have been afforded a strong background socially and culturally are sometimes overlooked by the teacher. Studies imply that an awareness on the part of the teacher should be apparent in relation to the student's background knowledge because it tends to influence reading comprehension (Anderson & Barnitz, 1984). This awareness should extend to the preconceived ideas which the teacher has concerning the student's abilities. Teachers sometimes tend to direct their attention to the child without this rich background under the assumption that the advantaged student will progress nicely because of it. Because of this attitude, these students are many times not challenged and the abilities they do possess are not encouraged. Guilford (1979) says that there is a need for teachers to be keen observers of those whom they teach. Social strata is not an absolute indication of academic ability; cues can be provided from the behavior of the learner.

Some false assumptions. Even though teachers pride themselves in the individual approach, they often make generalizations concerning types of students and their ability. Teacher expectations are a powerful determinant of a student's performance according to Wlodkowski (1986). The culturally advantaged student who is sitting quietly with a book may be through with the assignment, may be bored, may have read but not understood, or may be ready to explore the next level of interpretation. The student may be in need of enrichment. It is important here to know what enrichment is not; it is not merely more of the same. It is not extra after school assignments. It does mean broadening the child's curriculum to allow more depth in a subject and freedom in the area of intellectual curiosity (Kappelman & Ackerman, 1977). Reading skills in the area of comprehension may be present, deficient, or in need of stimulation and enrichment, but enrichment will never occur without first the awareness of the need. Nicholson (1985) contends that reading can improve with heightened teacher awareness of classroom confusion which underlies much of the learning.

Tell tale signs. Educators should be cognizant of students who appear to need help. They may or may not be discipline problems; their work is usually completed on time with sufficient detail. The student may gaze,

daydream, or doodle while the teacher's attention is directed at others who do not appear as accelerated. There is also the student who, in spite of a rich, experiential background, does not comprehend at the level one would expect. The decoding skills may be excellent, but the comprehension low. Teachers may attribute this lack of comprehension to disinterest or perhaps to underachievement when, in actuality, the student has a very real deficiency in understanding what is read. This may be due to stress, unrealistic goals for personal achievement, or pressure from successful parents who, in turn, expect success from their child. Dunn, Dunn, and Price (1979) explain that some students are uncomfortable when under pressure to concentrate, are fearful of failing, become embarrassed, and consequently are too tense to concentrate. It is this student to whom this study is directed. An independent sense of self is necessary for achievement--independent of others' expectations. It can only evolve when one sets self goals to attain; with attainment comes self esteem (Simpson, 1977). Helping the student to separate personal expectations from the parental and societal ones can help to increase the frequency with which the student encounters success in reading comprehension.

Comprehension

Comprehension is the real area of interest in reading

instruction; the factors include linguistic competence, interest, motivation, reading ability, and reading environment (Cheek & Cheek, 1983). The key issues to be investigated here are interest and motivation under the assumption that all other areas, including experiential background and world knowledge are at a level which is considered to be above average.

Comprehension can be increased through the use of established and enhanced conceptual knowledge. Concepts, which are a form of data or content that results from categorizing observations (Eggen, Kauchak, & Harder, 1979), can be used to heighten the uses of visual, mental imagery and raise a reader's comprehension (Sinatra, Stahl-Gemake, & Berg, 1984).

Social strata. Comprehension skills play no exclusive favorite to social strata. Although comprehension skills and world knowledge are interrelated--being heavily influenced by background information--(Rude & Oehlkers, 1984), lack of the skill is not designated only to the lower economic levels. There are students who come to educators with a wealth of world knowledge, parental support, healthy bodies, initiative and ambition, yet still fall behind in comprehension skills. The teacher's expectations of these students are differentiated according to who they expect to be high achievers and

who they expect to be low achievers (Good, 1982). The implication is that, instructors alternately expect more from students who are not considered low.

Approach. Students who are seemingly progressing in other areas but who have special problems with reading comprehension are sometimes not patient with the process of understanding. They are not willing to plod through the rote memory or words in order to discern meaning from the symbols on the page (S. Reese, personal communication, February 13, 1987). Reese, a vice principal and former classroom teacher, goes on to say that these students need special motivational techniques to create interest and understanding in their decoding process. The time used getting ready to read, whether student directed or teacher directed, is the most potent way to increase comprehension skills (Robinson, 1975). The more students experience success, the more they are apt to continue the strategies which gained the success. Using attribution is a way to code this behavior. Attribution, according to Bar-Tal (1978), is the inference made about the causes of behavior (cited in Wlodkowski, 1986). The application of attribution theory can increase success in comprehension and will develop achievement motivation. By changing a student's locus of control (the causal element of success or failure--either external or internal) with the use of

prerequisite conceptual exercises and mental imaging, comprehension should increase.

Attribution

Attribution theory, which is the conceptual analysis of causality and the extinction of it, concerns the allocation of responsibility for an event (Weiner, 1974). It is the inference made by an observer about the causes of behavior; this behavior may be that of the observer's or that of another individual according to Bar-Tal (cited in Wlodkowski, 1986). Weiner (1974) explains that the "achievement behavior is determined by try (effort) as well as can (ability)" (p. 196). Bar-Tal (1978) further clarifies attribution theory by stating that most people view the causes of their successes and failures as being due to their ability, their effort, the difficulty of the task, and/or good or bad luck (cited in Wlodkowski, 1986). Note in Figure 1 that when one attributes success to ability and effort, the result is increased pride and an expectation of similar performance in the future. Conversely, when one attributes failure to lack of ability and effort, shame and similar expectations for the future result.

Locus of control. Whether or not an individual perceives outcomes as contingent upon individual behavior (internal control) or upon the agency of luck or uncontrollable

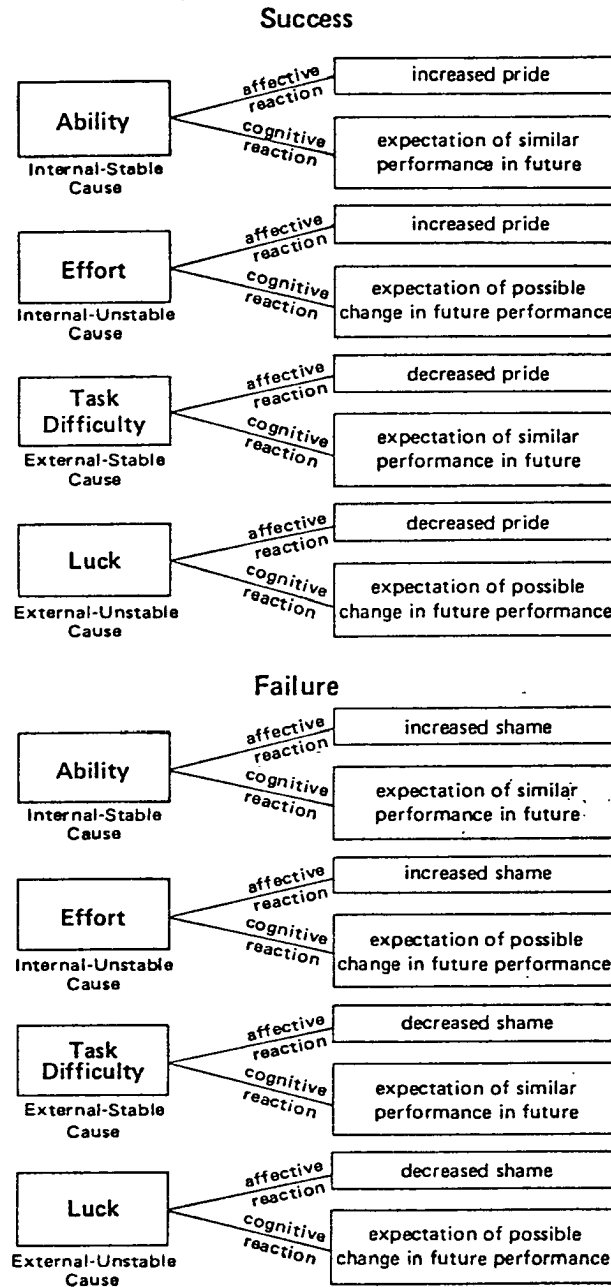


Figure 1. Affective and cognitive reactions in situations of success and failure as a function of attributions.

Bar-Tal, 1978 (cited in Wlodkowski, 1986)

factors (external control) refers to locus of control (Trice & Wood-Shuman, 1984). In reading comprehension, the approach, using attributional locus of control theory, is to verbally reinforce the student's concerted effort when it results in successful comprehension. An explanation that the success was due to effort should follow. The teacher should take advantage of every opportunity to model this behavior of equating success with effort and ability. High expectations and a high degree of challenge on the part of the instructor have a positive and beneficial effect on the student (Purkey, 1970).

A good way to instill self confidence due to effort is to create a challenge for the student where the chances of success are high; then say This is hard work, but I think that you can do it (Purkey, 1970). Success here would enable the student to feel pride in expended effort and ability, building and strengthening the child's sense of self efficacy. It should be stressed that success is controllable.

Self efficacy. A student's self efficacy is the degree to which the student feels that his/her effort expended is effective (P. Eggen, personal communication, February 12, 1986). Efficacy can be conveyed through attainments, social persuasion, or by socially vicarious means; it is affected by many things including self

perceptions of ability, task difficulty, effort expended, amount of external aid received, the situation under which the performance occurred, and encountered successes or failures (Bandura & Schunk, 1981). Bandura and Schunk (1981) explain that providing this attributional type feedback during competency development had an expectation of enhancing a child's rate of problem solving or task accomplishment and led to a higher self efficacy. When a student attempts a task, such as reading prose text, the higher the sense of efficacy, the higher the motivation for sustaining the task; telling children that they have been working hard should demonstrate to them that they can actualize their capabilities (Bandura & Schunk, 1981). Schunk's study (1983) showed that linking past achievement to effort promoted task involvement, skill development, and perceived self efficacy.

When a student is successful at an attempt, there must be an awareness that luck--a fortuitous happening--had nothing to do with it. Luck is an uncontrollable variable (Langer, 1983). The success must be made to be seen as an internal controllable force--effort--and, in reading comprehension, this constant reinforcement of effort = success should enhance the student's score in this area.

Concepts

While employing the internal locus of control movements attempts with the student, instruction should be given in prerequisite conceptual work when seeking to strengthen comprehension. Concept development is an outgrowth of content information that results from information processing skills; forming concepts is a naturally occurring human process which is the result of observation (Eggen et al., 1979). It is thought that concept formation is an essential part of learning which enables the reader to economically classify a world which is complex; it helps the reader to organize manageable categories (Rude & Oehlkers, 1984). Although the understanding of conceptual information starts when the child begins to tag names to objects, it frequently changes when the child enters school; here the concepts become more abstract and usually less meaningful to the student's immediate needs (Cheek & Cheek, 1983). The Cheeks go on to explain that since learning experiences are relevant to a child's immediate needs for information and many concepts taught in school are not done so in a meaningful way, students have difficulty in understanding and applying information.

Concepts and reading. Turning the symbols on the printed page into something meaningful is the hopeful

outcome of studying concepts before reading (S. Reese, personal communication, February 13, 1987). In reading comprehension, it is required that the student not only decode printed symbols and process visual information, but also the pupil must have a concept knowledge (Cheek & Cheek, 1983). Gagne's (1977) work in the area of learning concepts suggests several components: teach the concept, combine concepts, and consider learning hierarchical structure (cited in Lahey & Johnson, 1978). Students with an already plentiful store of world and experiential knowledge may benefit from concept enhancing or reinforcing exercises as a prerequisite to comprehension work; teachers must realize that concepts can be identified at different levels (Cheek & Cheek, 1983).

Concept strategies for reading. Teachers who use concept study to enhance learning and comprehension must consider how to identify the concepts which will appear in the text (Cheek & Cheek, 1983). An instructor must also be aware that brighter students learn to memorize symbols (words and groups of words) and will often recite the symbols as a substitute for learning the concept (Eggen et al., 1979).

The first step, according to Rude and Oehlkers (1984), is to identify important concepts in the piece to be read; the second is to determine whether or not the student

has an understanding of these concepts; the third is to provide experiential knowledge where it is needed. They go on to explain that the knowledge may be provided by way of "movies, filmstrips, dramatizations, interviews, experiments, models, pictures, cassette tapes, reading to the student, diagrams, and chalkboard drawings " (p.231).

Another strategy is the technique of relating the concept to one which the student already knows. The Concept Attainment Model (Joyce & Weil, 1972), the Taba Model (Taba, 1967), the Ausubel Model (Ausubel, 1968), and the Suchman Inquiry Model (Suchman, 1967), all employ extensive use of analogy and example and are "excellent" models to use for conceptual study (cited in Rude & Oehlkers, 1984).

The prerequisite study of concepts before reading attempts can not be ignored. Teaching this understanding of the information and providing ideas of what the student is expected to learn will create enthusiastic learners and better readers (Cheek & Cheek, 1983).

Imaging

The process of producing a picture in one's mind is referred to as imaging according to Ahsen (cited in Weaver & Cotrell, 1986). Because images are real and considered material pictures, they become highly significant stimuli creating a series of self revealing imagery effects (Weaver

& Cotrell, 1986). Visual presentations of a story and its elements can enhance comprehension (Sinatra et al., 1984). Mental pictorializations of events in a story can enable the reader to better comprehend the events of the story and their ramifications.

Visual mnemonics. Mnemonics is a memory enhancing technique. According to Peters and Levin (1986), there is great potential for aiding a student's associative processing of factual information contained in a prose passage. Tying the symbols of something meaningful within the student's frame of reference takes emphasis off decoding and transfers it to understanding. The "nuts and bolts" of learning can be a distracting and boring task for the average and above average child; making it meaningful is the first step toward increasing comprehension (S. Reese, personal communication, February 13, 1987). Reese contends that the teacher should start with meanings that the child already possesses. Mental imaging can accomplish this by association.

Visual mental imaging strategies. In Jacob's (1976) study, the determination was made that the ability of the subjects to generate or use visual imagery in their attempt to understand the written word was a central factor in differentiating the good from the poor readers (cited in Sadowski, 1983). Sadowski reports that imaging

appears to be both naturally present and functional in children in a school situation.

In Gambrell and Bale's study (1986), students were asked to make mental pictures in their minds or to do what they could to help them remember what they had read. This study investigated the effects of individual mental imagery upon comprehension. The study found that imagery was positively associated with comprehension monitoring processes.

As a student reads a story, instruction should be given to have the student consciously image what is transpiring in the story; they should mentally code actions, appearances, and situations which occur (Sadowski, 1983). Sadowski tested comprehension skills and measured the improvement which occurred through the use of three comprehension tasks: a retelling, a post oral cloze selection, and a multiple choice worksheet.

Effects. Imaging can serve as a comprehension strategy; it can serve as a mental peg and as mental storage. It can serve as a retrieval device and facilitate deeper meanings that utilize test information (Sadowski, 1985). Greeson and Zigarmi (1985) agree with McKim (1972) that educators today fail to make the student aware of the capacity for mental imagery and do not provide much opportunity to develop this inner source. Educators

must seek to recognize and to reinforce visual and spatial functions which seem so obvious yet are taken for granted in a society which is highly verbal and oriented to the written word (Greenson & Zigarmi, 1985). Gerler (1984) contends that more of an effort should be made to induce the learner to generate pictorial representations through internal imaging.

Through the use of attribution theory and the movement of one's locus of control from external to internal, through conceptual prerequisite instruction, and through the use of mental imaging, a student's comprehension in reading should be enhanced or increased.

Chapter III: Procedures

In order to carry out the purpose of this paper--to ascertain the degree to which reading comprehension scores will increase as a result of the application of the theory of attributional locus of control, prerequisite concept study, and imaging,--an identification of the differences in reading comprehension scores from the pretest to the posttest was made. It was assumed that an increase in comprehension scores would not be evidenced as a result of the above mentioned applications.

Subjects

The twenty students serving as experimental subjects for this study were socially advantaged tenth and eleventh graders who were pooled from the middle to upper income levels. According to their reading laboratory teacher, their reading comprehension scores were average to below. This was substantiated through their Standard Diagnostic Reading Test (1977) which was used as a posttest (Form B) by the reading teacher and was administered during the 1986-1987 school year. The control group was pooled from the same population.

Materials

An interest inventory (Rude & Oehlkers, 1984, p. 6) was given to the experimental group at the outset so that rapport could be established with the subjects. The test used as a pretest to chart comprehension scores was

the Gates-MacGinitie Reading Tests (1978), Level F-Form 1; it was administered to both the experimental and the control groups.

Level F, Form 2 of the same test was administered as a posttest to both groups to chart the same scores. The Gates-MacGinitie Reading Tests measure knowledge and skills important to school curricula and therefore its validity is upheld; all levels have excellent reliability as determined by the Kuder-Richard Reliability Formula 20:the "Kuder-Richard Reliability Formula 20 reliability coefficients were computed from the standardized test sample for each level of the test" (MacGinitie, 1978, p. 60). Throughout the study, exercises were taken from Improving College Admission Test Scores (1982), The Princeton Review:Cracking the System (1986), PSAT-NMSQT (1981), and Strategies in Reading, D, E and F (1984).

Design

The application of attributional locus of control theory, pre-reading concept work, and imaging took place with the experimental group over a one week period, two hours a day--ten contact hours. The control group received regular instruction. The study took place in a modular, air conditioned school with the permission of the principal. The noise factor usually present in this type of structure was insignificant as the noise level was reduced due to the fact that the study took place in the library/media center.

Application of internal control. Throughout the study,

with the exception of the pretest, students of the experimental group, were told that success was attributed to effort--an internal control. When the subjects experienced any degree of success, it was emphatically pointed out that it was due to their ability and their effort. A verbal This is difficult, but you can do it preceded each reading selection so as to enable the subject to feel pride when success was experienced. This behavior was also modelled by this experimenter by attributing personal success in the classroom to personal effort. This attempt to associate success with ability and effort--an internal locus of control--was ongoing and permeated the two hour sessions.

Prerequisite concept study. Preceding each reading, a concept study ensued. Concepts appearing in the selection were discussed and reviewed. The explanatory discussion continued, with examples, until all twenty subjects demonstrated through verbal example their understanding of the concept.

Imaging and visualization. The subjects were given specific strategies for imaging and visualization of what they were reading. The four criteria which foster inner imaging were discussed with the subjects of the experimental group--environment, motivation, relaxation, and locus (see Figure 2).

Conditions that Foster Inner Imagery

1. A quiet environment: Inner stimuli, often fragile, are easier to attend in an environment in which external stimuli are absent.(noise)
2. Motivation: Attention follows interest; you will more likely see mental pictures when you are motivated to do so (but not over-motivated).
3. Relaxed attention: Particularly important to inner imagery. Without a certain degree of relaxation, imagery is suppressed. Without a modicum of attention, imagery is random.
4. Find the locus of your imagery: For some people, inner imagery is "out there," in front of the eyes. For others, mental pictures are experienced in the middle of the head. Some people see mental pictures more readily with their eyes open, others with eyes closed. Experimentation will help you to find the locus of your imagery.

Figure 2: Conditions that foster inner imagery. (McKim,1972, p.85)

Prior to each reading selection, the subjects were instructed to actively image the story or article--the action and key concepts. McKim's (1972) mind's eye reading was discussed and explained (see Figure 3) with the students of the experimental group. The technique of visualizing key elements and concepts was applied throughout the study.

Results

Analysis of covariance was done with a pretest and posttest control group design. The Gates-MacGinitie Reading Tests (1978) scores for comprehension for the twenty subjects of each group, experimental and control--Level F, Form 1 as the pretest and Level F, Form 2 as the posttest. The varying scores from the pretest to the posttest were compared as to the differentiation of scores in both groups. A related sample t test was used to test the null hypothesis. H_0 : There will be no significant difference in reading comprehension scores as the result of the application of attribution theory in the movement of an internal locus of control to an external one, concept study, and the imaging of the text ($\alpha.05$).

Mind's Eye Reading

Whenever you read, simultaneously translate the verbal description into full polysensory imagery. For example, when reading a news item, visualize people, locale, and sequence of events; use other senses as well: hear sounds, smell odors, and so on. A well known speed reading course advises students to scan the words of a novel while simultaneously seeing the plot unfold in an internal cinema of sensory imagination. Image-laden poetry is an especially rich vehicle for mind's eye reading.

Figure 3. Mind's eye reading.

(McKim, 1972, p. 91)

Chapter IV: Results

The purpose of this experiment was to assess the possibilities of using a more aware approach with the advantaged student by using attribution theory in attempting to move the student's locus of control from external to internal by modelling this behavior and verbally reinforcing the student's successful attempts at reading comprehension. Instruction in concepts was applied before the attempt and the student's imaging of the events of the prose selection took place throughout the experiment.

The twenty students of the experimental group, composed of tenth and eleventh grade advantaged students, were administered an interest inventory initially; the Gates-MacGinitie Reading Tests, Level F, Forms 1 and 2 were administered as a pretest and posttest, respectively. The control group, who received no interest inventory, was composed of twenty students from the same population as the experimental group--the population being students who had the advantage of parental concern, average to high academic capabilities, and financial freedom. They were administered the same pretest and posttest as the experimental group. The experimental group received instruction based on the application of attribution theory (movement of locus of control from external to internal), pre-concept work, and imaging while the control group received regular classroom instruction from their assigned teacher.

The means and the standard deviation for both the experimental and control group are presented in Table 1. The results from the analysis are reported in Table 2.

The experimental group had a higher mean score on the posttest than on the pretest whereas the control group had a lower mean score on the posttest than on the pretest. The control group had a higher mean than the experimental group on both the pretest and the posttest. When the posttest scores were adjusted by the covariance analysis, the experimental group had an adjusted posttest mean of 30.15 as compared to 24.05 for the control group. The experimental group showed significant gain between the pretest and posttest whereas the control group did not.

Table 1

Means and Standard Deviation
for the Experimental and Control Group

Group	Pretest		Posttest		Adjusted Mean
	x	sd	x	sd	
Control	31.05	6.79	27.30	8.31	24.05
Experi- mental	23.02	6.12	26.90	5.88	30.15

Table 2

Analysis of Covariance (with the
Pretest Score as the Covariate)

Source of Variation	Sum of Squares	df Degrees of Function	Mean Square	F	P
Main Effects	268.74	1	268.74	<u>11.30</u>	<u>.002</u>
Residual	879.63	37	23.77		
Total		38			

The null hypothesis was that there would be no significant difference in the gain scores between the experimental and control groups. Analysis of covariance was computed with the pretest scores as the covariate. An F of 11.30 was computed and was significant at the .002 level. The null hypothesis was rejected.

Chapter V: Conclusions and Recommendations

The purpose of the study was to determine whether or not the experimental group--as opposed to the control group--would experience a significant increase in their reading comprehension scores as a result of the application of attribution theory and the movement of their locus of control from external to internal, concept study, and the use of imaging.

The experiment with the twenty summer school subjects, conducted over a period of five days at two hours a day, was performed with the advantaged student. The students generally came from a background which included parental concern, average to high academic capabilities, and financial freedom. The students expended effort under the application theory; in moving their locus of control from external to internal, their successes were attributed by them as being due to their efforts. Imaging techniques were applied by the student to each reading selection. The subjects visualized key words and events in each selection and the concepts which were encountered were discussed throughout.

The use of the interest inventory at the outset proved to be fruitful as a rapport was established between the experimenter and the subjects of the experimental group. Family life, interests, and relationships were discussed

in an informal manner; any free moment available was used to bring the subjects to a clearer understanding of the student-teacher relationship. Concern as well as interest was expressed for any problem the subject may be having. This type of conversation usually took place before class, on breaks, or after class. It was observed by the experimenter that this relationship was a major contributing factor to the success of the experiment as it instilled in the student a desire to perform--a desire to please. The student-teacher relationship proved to be critical in this experiment in that it served as a motivational technique.

The differentiation of the scores of the experimental group's pretest and posttest--the posttest being significantly higher--was a result of comprehension exercises which continued throughout the two hour segments; the subjects were actively encouraged to push themselves to their potential and not allowed to rest or to stop reading. This was not done without a considerable amount of dissatisfaction on the part of the participants of the experimental group. Even though the students were motivated to work as a result of the student-teacher relationship, it could not be said that they were overly eager to work. Some students were enrolled in the summer school program to make up for a lost credit while others were enrolled to get credits out of the way. With the legislative mandate of stiff graduation requirements, more and more students are enrolling in summer school for the reason of getting

certain courses out of the way to allow themselves more leeway in the coming year. Nevertheless, the summer school mentality pervaded the experiment as evidenced through the participants verbal complaints of having to work. The summer school mentality, for purposes here, is defined as an attitude of having the expectancy of receiving a grade for minimum effort and work. This task of overcoming this minimalist philosophy of the summer school student had to be continually addressed by this researcher.

The control group, which consisted of twenty subjects, was also chosen on the basis of having parental concern, good academic background, and financial freedom. The students in the control group all exhibited traits which, by admission of their teachers, indicated that they could benefit from comprehension work and that they were not presently working up to their expected potential. Their pretest scores were charted (the Gates-MacGinitie Reading Tests, Level F, Form 1) and their posttest (the Gates-MacGinitie Reading Tests, Level F, Form 2) were charted. These students had no relationship with the experimenter in the classroom situation; the only contact that the control group had with the researcher was the contact that was made when the pretest was administered and when the posttest was given at the close of the experiment. The control group was told that they were taking part in an experiment and that they were to take a test. It is important to note that no rapport

of any kind was established between the experimenter and the control group through the administration of the Gates-MacGinitie Reading Tests for the pretest and the posttest. The control group's instruction was the result of their regular summer school classroom teacher. The positive relationship and rapport that was established between the experimenter and the experimental group was paramount to the success of the study.

Recommendations for further study and experimentation in the area of applied attribution theory, concept study, and imaging are two fold. The first recommendation is that, even though the gains between the control and experimental group were significant, working longer with the students would be preferable and beneficial. The experimental group's behavior was modified to a significant degree in a short time, but a better understanding of one's capabilities when connected with effort may be attained by the student from a longer exposure to efforts as described above. The exposure to those techniques (equating effort with ability, concept study, and imaging) over a period of months--the school year being ideal--would allow the student to assume an attitude of equating effort with success and the ability to image and understand concepts would eventually permeate other areas of the student's life as well as other academic areas. The second recommendation is that a study should be done to determine whether or not the gains made by the advantaged student would be significantly greater than

the gains made by a population of students with the same academic potential but, from a disadvantaged background. That is, a background which includes low to no parental encouragement or support, the lack of a financial base that is average to above, and in some cases, the lack of good health. This type of study could determine whether or not it is the negative criteria associated with the disadvantaged student which contributes to the student's lack of ability to equate success with effort or whether a background with negative criteria is a determining factor at all.

It is apparent, through this study, that the use of applied attribution theory--the equating of success with effort, the use of prerequisite concept knowledge, and the use of imaging can positively affect the comprehension scores of a group of selected, advantaged students. It is concluded here that these techniques would be of great advantage to the reading and classroom teachers. The positive relationship established by way of the experiment raises the student's self concept and desire to please. This attitude benefits the student as evidenced in the significant gain between pretest and posttest scores for the experimental group. Perhaps these same techniques could be applied to other groups of varying students to their advantage.

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